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Discussion of Mark J. Browne's "The Definition of Insurance: Implications for a Health Insurance Demand Model"

Charles Fuhrer
Washington National Insurance Co.

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I would like to thank Professor Mark Browne for this contribution to the actuarial literature. To the best of my knowledge, actuaries have not written on the subject of his paper.

I propose alternative measures of the amount of insurance to the author's *I1*, *I2*, and *I3*. These are:

$$I1 = \sum_i \sum_{j=1}^{N} E[OOP_{ij}]$$

$$I2 = \sum_i \sum_{j=1}^{N} E[B_{ij}]$$

$$I3 = \frac{I1}{\sum_i \sum_{j=1}^{N} E[L_{ij}]}$$

where i ranges over all insured for all insurance policies. The author selected his definitions of measures of insurance from the literature and, of course, is free to define them in any way he desires. I believe my measures would be more useful, particularly for the purpose of the paper.

My measures correspond to what would be the normal way of ordering policies. For example, suppose two policies A and B were identical except that they had \$100 and \$200 deductibles, respectively. For my measure, A would provide more insurance than B. This

* Charles S. Fuhrer, FSA (1977) of the Washington National Insurance Co. in Lincolnshire, IL has been a group insurance actuary since 1973. He is co-editor of *Actuarial Research Clearing House* and has given numerous presentations at actuarial meetings. Mr. Fuhrer has written many papers and has been awarded the 1988 Practitioner's Prize by the *AERF* and the 1991 Health Section Research Papers Prize.

is the normal result because A often pays more benefits than B and never pays less. Under the author's definitions, if A were purchased by a healthier insurance than B, then A might have a lower value of $I2$. Generally, I would expect that a measure of the coverage level of an insurance policy would be independent of the individual that chooses to purchase it.

The author tries to answer whether certain factors influence the purchase of different amounts of insurance. Some of these factors are correlated directly with the demand for health care. Because his measures of the amount of insurance are affected by the demand for health care, correlations exist. An interesting question is: "Do individuals who will have a greater demand for health care services recognize this fact and then purchase insurance policies with greater reimbursement provisions?" I believe that the author fails to answer this question.

Charles Fuhrer
Washington National Insurance Co.
300 Tower Parkway
Lincolnshire, IL 60069-3665

Author's Reply to Discussion

The comments of Mr. Charles S. Fuhrer are greatly appreciated. His suggestion of several alternative measures of insurance is valuable. A primary aim of my paper was to raise the question of how to determine the amount of coverage an insured has. While my paper proposes several measures, future researchers may want to consider the merits of others as well.

Fuhrer's measures of an insurance policy are "independent of the individual that choose to purchase it." Such measures of insurance emphasize the contractual provisions of a policy while failing to account precisely for the amount of risk transferred by the policy. Little information on the economic value of an insurance policy to an individual insured can be gained from such measures. The measures, however, may be valuable for an insurer when examining a complete book of business.

The question raised by Mr. Fuhrer, of whether individuals who are higher risks purchase insurance policies with greater reimbursement provisions, is beyond the scope of the current study. This question has been addressed in three prior studies. Interested readers are

referred to Browne (1992), Browne and Doerpinghaus (1993), and Browne and Doerpinghaus (1994).

References

Browne, M.J. "Evidence of Adverse Selection in the Individual Health Insurance Market." *Journal of Risk and Insurance* 59, 1 (1992): 13-33.

Browne, M.J., and Doerpinghaus, H.I. "Information Asymmetries and Adverse Selection in the Market for Individual Medical Expense Insurance." *Journal of Risk and Insurance* 60, 2 (1993): 300-312.

Browne, M.J., and Doerpinghaus, H.I. "Asymmetric Information and the Demand for Medigap Insurance." Working Paper at the University of Wisconsin-Madison (1994).